

## **REMARKS**

### **Objections to the Specification**

The Office Action objects to the presence of embedded hyperlinks in the text of the application on page 26. In response, a substitute paragraph has been provided from which the hyperlinks have been removed.

### **Objections to the Claims**

The Office Action objects to the acronym HSQC in claim 11, and the term “tree dimensional” in claim 20. In response, the full term “heteronuclear single quantum coherence” has been inserted in claim 11, and the term “tree” has been changed to “three” in claim 20.

### **Claim Rejections – 35 U.S.C. § 112**

The Office Action rejects claims 1 and 19 because they recite a method for improving the binding affinity of a ligand for a target, when the final step is one of analysis and not improvement. In response, Applicants have amended claims 1 and 19 to include the step of constructing a ligand based upon the claimed analysis.

The Office Action rejects claims 1 and 5 for using the antecedent term “the” without adequate antecedent basis. In response to the rejection, Applicants have replaced “the” with “a.”

The Office Action also rejects claim 5 for failing to specify what the recited orientation is relative to. In response to the rejection, Applicants have amended the claims to clarify that the relative orientation is between the first and second ligands.

The Office Action also rejects claims 5 and 20 because they use the term “substantially.” The Office Action questions whether “substantially” means that the orientation is in almost the relative position or exactly the relative position. In response, Applicants states that the term “substantially” includes both almost and exact positions.

### **Claim Rejections – 35 U.S.C. § 102**

The Office Action rejects various pending claims under 35 U.S.C. § 102, contending that the pending claims are anticipated by Johnson et al. (1999). As the Office Action acknowledges, the reference teaches a method of using NMR spectroscopy to provide structural understanding of the binding properties of N-termina cellulose binding domains from *Cellulomonas fimi* cellulose CenC. The reference does not teach the steps of deducing a relative three-dimensional orientation of the first and second ligands when bound to the biological target; deducing a distance of separation of the first and second ligands when bound to the biological target; and

selecting or preparing a compound that contains the first and second ligands substantially in the relative orientation and distance, as recited in the pending claims, and thus does not anticipate them.

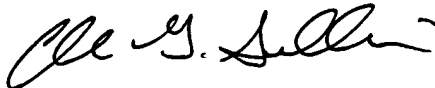
**Claim Rejections – 35 U.S.C. § 103**

The Office Action further rejects the claims under 35 U.S.C. § 103 under Johnson et al. (1999) in view of Fischer et al. (1999). According to the Office Action, Fischer et al. (1999) discloses the added feature of producing a field ordered state. However, Fischer et al. (1999) does not overcome the deficiency present in Johnson et al. (1999) which, as noted above, does not describe deducing a distance of separation of the first and second ligands when bound to the biological target, and selecting or preparing a compound that contains the first and second ligands substantially in the relative orientation and distance. Because Fischer et al. does not make up for this deficiency in the base reference, it does not give rise to a prima facie case of obviousness. Because none of the prior art in the Office Action suggests modifying the base reference (Johnson et al.) to perform the additional step recited in the pending claims, the references do not support a prima facie case of obviousness.

**CONCLUSION**

A petition for a two-month extension, extending the time within which to respond to July 25, 2004, is being filed concurrently herewith. Please grant any additional extension of time required to enter this response and charge any additional fee, or credit any overpayment to Deposit Account No. 11-0980.

Respectfully submitted,



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